

# EAHC21 – Advanced Heat Recovery Control

The EAHC21 is an automatic control system for up to two heat recovery units (standard). It is designed to be used in conjunction with exodraft chimney fans and heat exchangers. The heart of the EAHC21 system is a WAGO PLC control with various digital and analogue I/O modules connected to terminal blocks for easy interface. A 7" touch screen allows for monitoring and configuration of the system.

The EAHC21 control monitors and maintains specific pressures and temperatures by controlling the speed of a chimney fan and by regulating the water temperature in the hydraulic system. It also monitors the pressure loss in the heat exchanger as well as other critical values in the heat exchanger system. The different pressures in the system are measured by XTP 150 sensors and the temperatures by PT1000 sensors. If the pressure and temperature setpoints of the system reach critical levels, a warning will be shown on the display and an alarm relay will be activated.

The touch-enabled display gives the user the option to monitor the values of both the flue and hydraulic systems. The latest warnings and trend curves are visible for both systems. With a flow meter installed, the user can continuously monitor the production (kW) of the system.

#### **Features**

- Input and output to 2 heat recovery units and 2 buffer tanks
- Remote access via web server
- Easy installation
- Expandable I/O capacity
- Multiple bus compatible (BACnet, MODBUS/IP, KNX, PROFIBUS)
- Integrated touch display with userfriendly interface
- 3 standard motor configuration options

### **Approval**

| EN 61 439-1:2014*     | Type-tested and partially type-tested assemblies   |  |  |
|-----------------------|--|--|--|
| EN 60 204-1:2006*     | Safety of Machinery - Electrical equipment of machines, Part 1: General requirements   |  |  |
| EN ISO 13 850:2008*   | Safety of Machinery, Emergency stop, Principles for design (ISO 13850:2006)  |  |  |
| EN ISO 13 849-1:2008* | Safety of Machinery, Safety related parts for control system, Part 1: General principles for design  |  |  |
| EN 60757              | The color-code on wires: The English abbreviation for indication of the colour used on connecting lines (wires) is according to this standard. |  |  |

\*These standards are only in use as far as it is of relevance in relation to the actual "Low-voltage switchgear and controlgear assemblies".

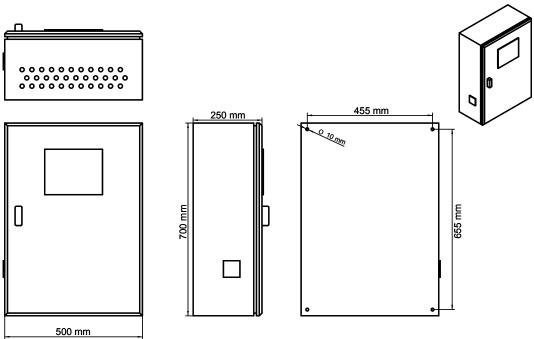


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## **Technical Data**

| Description                                     | EAHC21 TRIAC                             | EAHC21 VFD+TRIAC                         | EAHC21 VFD         |  |
|---|--|--|--------------------|--|
| exodraft order no.                              | 3201067                                  | 3201071                                  | 3201068            |  |
| Height x width x depth                          |  |  |                    |  |
| ·   | 700 x 500 x 250 mm                       |  |                    |  |
| Weight  | 30 kg<br>IP54 / Steel                    |  |                    |  |
| IP-rating / material Voltage                    |  |  |                    |  |
| 3   | 1x230 V AC ±10 %, 50 Hz                  |  | ,                  |  |
| Rated Current                                   | 4A                                       | 20A                                      | 25A                |  |
| Temperature                                     | 0 to 55 ℃                                |  |                    |  |
| НМІ   | 7" Resistiv Touch LCD 800x480            |  |                    |  |
| Inputs  |  |  |                    |  |
| Digital potential free                          | 2  |  |                    |  |
| Digital 24-230 V AC/DC                          | 2  |  |                    |  |
| XTP-sensor 0-10V Analog                         | 4  |  |                    |  |
| Flow Sensor 0-20 mA / 0.3-15 m <sup>3</sup> /h  | 2  |  |                    |  |
| PT100/PT1000 Temperature sensor                 | 8  |  |                    |  |
| Outputs   |  |  |                    |  |
| Digital potential free                          | 6 - 250V/8A                              |  |                    |  |
| Digital 230V output                             | 4 - 230V/6A total                        |  |                    |  |
| General purpose potential free                  | 2 - 250V/8A                              |  |                    |  |
| 0-10V Analog                                    | 4  |  |                    |  |
| Chimney Fan output                              | 2 x 70-230V / 4A                         | 1 x 70-230V / 4A + 1 x<br>3x230V / 1.5kW | 2 x 3x400V / 1.5kW |  |
|   |  |  |                    |  |
| Pressure sensor data                            | XTP 150                                  |  |                    |  |
| Dimension (w x h x d)                           | 75 x 92 x 49 mm                          |  |                    |  |
| Operating temperature                           | 0 to 70 °C                               |  |                    |  |
| Monitoring range                                | 0 to +150 Pa (0 to 250 Pa)               |  |                    |  |
| Max. distance between controller and XTP sensor | 100 m                                    |  |                    |  |
| IP-rating                                       | IP54                                     |  |                    |  |
| mA  | 30                                       |  |                    |  |
| Communication options                           | BACnet, MODBUS/IP, KNX, MODBUS, PROFIBUS |  |                    |  |

#### **Dimensions**



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